

## AGC/WSDOT Structures Team Minutes

### 6 April 2007

#### Members

| Attendees:             | Company                 | Phone        | E-mail   |
|------------------------|-------------------------|--------------|--|
| Ayers, Scott           | Atkinson Constr.        | 425-255-7551 | <a href="mailto:scott.ayers@atkn.com">scott.ayers@atkn.com</a>                       |
| Barney, Millard        | Concrete Tech.          | 253-383-3545 | <a href="mailto:mbarney@concretetech.com">mbarney@concretetech.com</a>               |
| Beaver, Jesse          | HQ Constr. <sup>1</sup> | 360-705-7825 | <a href="mailto:beaverj@wsdot.wa.gov">beaverj@wsdot.wa.gov</a>                       |
| Brecto, Barry          | FHWA                    | 360-753-9482 | <a href="mailto:barrybrecto@fhwa.dot.gov">barrybrecto@fhwa.dot.gov</a>               |
| Case, Derek            | NWR <sup>1</sup>        | 425-433-2002 | <a href="mailto:cased@wsdot.wa.gov">cased@wsdot.wa.gov</a>                           |
| Foster, Marco          | WSDOT-NWR               | 360-757-5999 | <a href="mailto:fosterm@wsdot.wa.gov">fosterm@wsdot.wa.gov</a>                       |
| Kapur, Jugesh          | HQ Bridge <sup>1</sup>  | 360-705-7209 | <a href="mailto:kapurju@wsdot.wa.gov">kapurju@wsdot.wa.gov</a>                       |
| Madden, Tom            | UCO <sup>1</sup>        | 206-768-5861 | <a href="mailto:maddent@wsdot.wa.gov">maddent@wsdot.wa.gov</a>                       |
| Olson, Ryan            | Mowat Constr.           | 425-398-0205 | <a href="mailto:ryan.olson@mowatco.com">ryan.olson@mowatco.com</a>                   |
| Sheikhizadeh, Mohammad | HQ Constr. <sup>1</sup> | 360-705-7828 | <a href="mailto:sheikhm@wsdot.wa.gov">sheikhm@wsdot.wa.gov</a>                       |
| Swenson, Robb          | General Constr.         | 360-394-1407 | <a href="mailto:Robb.Swenson@kiewit.com">Robb.Swenson@kiewit.com</a>                 |
| Welch, Pete            | Wilder Constr.          | 425-551-3100 | <a href="mailto:petewelc@wilderconstruction.com">petewelc@wilderconstruction.com</a> |

<sup>1</sup> WSDOT

#### Guest

| Attendee:     | Company     | Phone        | E-mail |
|---------------|-------------|--------------|--------|
| Ecklund, Jack | Quigg Bros. | 360-533-1530 |        |

The meeting started at 09:00.

#### **1. Approval of March Meeting Minutes**

Tom Madden provided comments to clarify several acronyms and cases of unclear text. The team had no further comments.

**Action Item:** Jesse Beaver will update the minutes and post them to the WSDOT HQ Construction website. No further action by team.

#### **2. Update on Local Fly Ash Production**

Mohammad Sheikhizadeh provided an update on local fly ash production. Key points included the same information conveyed at the previous meeting as well as the following:

- Centralia coal-fire power plant has another series of shut-downs planned for maintenance and due to the lower cost of hydro-electric power; these shut-downs will further reduce available fly ash
- The current fly ash production from Centralia is expected to change over time as their burning process is adjusted for performance reasons; this may include addition of kaolin clay that could once again result in production of fly ash with Class F properties

Team discussion included the following points:

- Millard Barney informed the team that Concrete Technology uses only Class F ash that is shipped from Edmonton through Glacier Northwest. Millard will provide the technical basis and acceptance criteria that Concrete Technology uses to evaluate fly ash sources
- Ryan Olson, Mowat, discussed use of Class 4000D with slag for a new bridge deck in Fremont, WA; Ryan will evaluate the deck for cracking and provide this feedback to the team
- Total concrete cost is expected to increase as a result of alternate admixtures to get the properties that were provided by Class F fly ash

**Action Item:** Team members are requested to provide feedback on fly ash alternatives. Mo will continue to update team on local fly ash production and related WSDOT action.

### **3. Location of Screed Supports for Staged Constructed Decks Standard Specification 6-02.3(10) Roadway Slabs**

Mo provided a handout with draft revision to the standard specification that added “For staged constructed bridge decks, the screed rail supports shall be placed in the deck closure and not on the bridge deck”.

Team discussion included the following:

- A girder could be placed within the closure and this would provide support for the rails and bulkheads to form the edges of each staged deck; team believes this will be problematic for girders with narrow width flanges; differing opinions on the necessity of girder within the closure
- Requirement is to support rails on new girders so deck finishing machine supports deflect with the newly placed deck

**Action Item:** WSDOT HQ Construction will revisit this topic and bring draft specification changes for review by the team before incorporation.

### **4. Revisions to the Standard Wall Joint Spacing**

Jugesh Kapur stated that the spacing between retaining wall expansion joints would increase to 48 ft minimum when a traffic barrier is present on top of a wall. This length is required to distribute the new 54 kip impact load specified in AASHTO LRFD.

Team discussion included the following points:

- Contractors want to use reduced length between expansion joints for shorter height walls
- Curved walls can be met by chording between points on the true alignment, per existing Standard Specification
- Team questioned joint spacing requirement for walls without barrier

**Action Item:** Bridge Design will revise standard plans and Jugesh will update the team at the next meeting.

## **5. Electronic Plans Availability in PDF**

Jesse Beaver discussed action by WSDOT to make the contract plans and provisions available via the WSDOT website in PDF format.

Team discussion included the following points:

- Invite Ken Walker, WSDOT Contract Ad & Award, to team meeting to discuss this and other changes to use electronic documentation for contracts and for bidding process
- Barry Breto indicated that any potential security concerns with electronic plans would be WSDOT's responsibility
- Contractors would like to get CAD files to accompany contract documents

**Action Item:** Jesse Beaver will keep team informed of electronic plans availability and future action to use electronic means for bidding and award process.

## **6. Deletion of Standard Specification 5-05.3(19) Reinforced Concrete Bridge Approach Slabs**

Mo provided a handout of standard specifications revisions to relocate reinforced concrete bridge approach slabs from chapter 5 to chapter 6, based on recommendation from AGC Roadway team and revisions by Kurt Williams of HQ Construction. As part of the change, an "A" is added to identify approach slab structural concrete. Class 4000A has 1 inch nominal maximum aggregate and 10 day wet cure requirement.

Team discussion included the following points:

- Mo will bring photos to compare concrete pavement to concrete approach slabs
- If de-icers with chlorides are used, approach slab rebar coatings should be evaluated
- Need guideline for construction loads on approach slabs
- Team has no problem with required curing; most Contractors have been following this method for all past approach slabs
- Diamond grooving will be required for approach slab

**Action Item:** No further action by team.

## **7. Deck Overhang Tapered Soffits**

Derek Case opened discussion of a change to the details for cantilevered soffits by questioning the team on constructibility of the current tapered soffit versus a squared horizontal soffit. Derek explained that this discussion was motivated by use of slab bolsters to support lateral bottom bars and how this process would be facilitated with squared soffits.

Team discussion included the following points:

- Current tapered construction hides pad depth and improves the look of the exterior girders
- Squared edges would require overhang brackets to be customized for varying pad depths
- Team sees difficulty when taper is too steep, but otherwise prefers to keep tapered soffits

**Action Item:** Team recommends no change to the design or construction. No further action by team.

#### **8. Release of Formwork in Less than 24 Hours-Standard Specification 6-02.3(17)N**

WSDOT uses 24 hrs as minimum time before formwork release for side forms as long as early break cylinders show 1400 psi strength on the last concrete placed. Team members would like to evaluate reduction or removal of these requirements.

Team discussion included the following points:

- Typical exemption request WSDOT receives is for walls and barriers
- Team recommends removing 24 hr requirement and substituting statistical demonstration of early strength
- Getting early break cylinders tested is problematic due to availability of lab facilities
- Team questions 1400 psi requirement for stripping strength; performance of structure in non-safety critical applications is the Contractor's responsibility

**Action Item:** WSDOT HQ Construction will evaluate removal of 24 hr requirement in conjunction with additional of strength qualifying method that reduces early break cylinder use. Changes will be presented to the team for comment before incorporation as standard specification.

#### **9. Constructibility Review Procedures by the Structures Team**

The team has been providing constructibility feedback to WSDOT Bridge Design and various regions. This feedback is often provided at a time in the design that may not be timely enough to have significant influence. How can WSDOT/AGC Structures team maximize positive influence of their feedback and make most efficient use of time for all involved?

Team discussion included the following points:

- Team wants to review projects after creation of the preliminary bridge & structures plans, which is typically at 30% completion; these plans provide type, size and location (TS&L)
- Team will prepare a single page of required documents for a constructibility review, including the following:

- i. Project description
  - ii. Questions that designers would like team to address
  - iii. Preliminary plans for structures and overall project layout
  - iv. Constraints on design and options previously considered and eliminated
- Team would like to have project documentation 1 week before the meeting

**Action Item:** A Contractor team member, to be selected by Scott Ayers, will prepare the constructibility review checklist.

#### **10. Electrical/Mechanical Contract Support**

Mo provided a handout of the new flowchart for requests for information (RFI), change orders (CO), and drawing reviews for electrical and mechanical contracts. The flowcharts document internal WSDOT procedure.

Team discussion included the following points:

- Team was greatly in favor of the new documented process and felt that the new procedure would result in quicker turnaround on information requests and facilitate change order action on electrical mechanical contracts; discussion indicated that the new processes would be similar to the procedures followed on other types of WSDOT contracts
- Team questioned method for adding consultants to available on-call list, such as HNTB; the list is typically reviewed and updated every 2 years

**Action Item:** Team is requested to provide feedback to HQ WSDOT on the new procedures.

The meeting was adjourned at 12:00.

The next meeting is scheduled for **18 May 07**.